

Series 650

Universal, solvent based, 1C and 2C Screen Printing Ink

Silky glossy and highly opaque screen printing ink, Series 650 for printing on plastics, coatings and

metals. Typical applications are promotional materials, technical components, toys and packaging.

Application

- › Signs in metal and plastic
- › Stickers
- › Toys
- › Promotional material
- › Packaging

Substrates

Substrate	Rating	Hints
ABS, SAN	★★★★	
Polyamide (PA), pre-treated	★★★★	
Polyamide (PA), non pre-treated	★★★★	
Acrylic glass (casted PMMA)	★★★	
Primered / coated foils	★★★	
Rigid PVC	★★★	
Rigid PVC, foamed	★★★	
Wood, uncoated	★★★	
Coated surfaces / powder coatings	★★★	
PET-A	★★★	
PET-G / PET-GAG	★★★	
Polycarbonate (PC)	★★★	
Polyester, primered	★★★	
Polyethylene (PE), pre-treated	★★★	
Polypropylene (PP), pre-treated	★★★	
Polystyrene (PS), mat	★★★	
Composite materials	★★★	
soft PVC self-adhesive foils	★★★	
Metal	★	

Legend ★★★★★ Very well suited ★ Detailed pre-tests necessary

Note: A detailed overview of all substrates of product group 600 can be found here: www.printcolor.ch/bedruckstoffe

Characteristics

Feature	Rating	Hints
Alcohol- and gasoline resistance	★★★	Improvement by use of Series 600-HDA (20% by weight)
Resistance to adhesives	n/a	
Block resistance	★★★	
Flexibility	★★★★	
Gloss	★★★	Silky glossy
Resistance to hand sweat	★★★★	Improvement by use of Series 600-HDA (20% by weight)
Light fastness	★★★★	
Abrasion resistance	★★★★	Improvement by use of Series 600-HDA (20% by weight)
Pigmentation	★★★★★	
Sieve openness	★★★★	
Temperature resistance	★★★	
Drying	★★★★	
Moldability	★★★★	Thermoforming after preliminary tests
Water resistance	★★★★	Improvement by use of Series 600-HDA (20% by weight)
Weather resistance	★★★★	Improvement by use of Series 600-HDA (20% by weight)

Legend ★★★★★ Very good product properties n/a No information available
 ★ Product properties not available

Product Range

MS Basic Colors

Article no.	Color	HP	Article no.	Color	HP
650-1000	MS light yellow	•	650-3300	MS magenta	•
650-1100	MS medium yellow	•	650-4000	MS violet	•
650-1200	MS dark yellow	•	650-5000	MS blue	•
650-2000	MS orange	•	650-6000	MS green	•
650-3000	MS red	•	650-7000	MS brown	•
650-3100	MS magenta red	•	650-8000	MS black	•
650-3200	MS dark red	•	650-9000	MS white	•

HP High Pigmented

Note I: all abbreviations used in this chart are explained in detail on the last page of this data sheet.

Other Colors

ST Colors	ST Color Chart / www.printcolor.ch/stcolorguide	
ST Metallics	ST Color Chart / www.printcolor.ch/stcolorguide	
ST Neon Colors	ST Color Chart / www.printcolor.ch/stcolorguide	
Special Colors	Pantone®, HKS, RAL and after customers sample	
Others	Series 650-00	ST white
	Series 650-04	Thixotropic paste
	Series 650-05	Varnish
	Series 650-05/MT	Varnish, mat
	Series 650-06	Retarder paste
	Series 650-07	Binder
	Series 650-33	ST black

Auxiliaries

Thinner	Series 600-017	Addition ratio	10-20% by weight
Retarder	Series 600-018	Addition ratio	5-15% by weight

Hardener

	Series 600-HDA	Series 600-HDI	
Application	Duroplasts / Aluminum / Sheet metal	Duroplasts / Aluminum / Sheet metal	
Addition ratio	5:1	5:1	
Reactivity	Medium reactivity from 20°C	Higher reactivity from 15°C	
Resistance to chemicals	Good	Good	
Outdoor resistance	Good	Not recommended	

Note: a detailed overview of all available auxiliaries can be found in a separate data sheet.

Processing

Mesh

All commercially available polyester mesh can be used.

Stencils

All commercially available stencils can be used.

Curing

Bonding of the ink system depends on temperature, used hardener and layer thickness. To reach maximum resistance, a minimum temperature (see point „hardener“) must be guaranteed over a duration of 5 to 10 days. By increasing the temperature the ink film cures faster and an earlier and even better chemical resistance can be achieved.

Curing times

Series 600-HDA	7 days (at minimum temperature)
Series 600-HDI	5-7 days (at minimum temperature)
Forced drying	From 20 minutes at 140°C up to 60 minutes at 80°C

It is important to ensure, that temperatures do not fall below within the first 48 hours. An increased moisture supply during drying time can permanently damage the ink film.

Pot life

MS colors and its blends have a pot life of 4-8 hours, depending from the hardeners used and depending on environmental conditions. Significantly shortened pot life has to be encountered with metallic colors.

Overprintability

The ink film can be overprinted preferably before complete curing of the ink.

Further Processing

- › Cutting
- › Punching
- › Embossing

Cleaning

Intermediate cleaning of stencils and squeegees should be done in a timely manner with Series 600-BRS. Final cleaning can be done with Series 600-URS.

Productivity

Depending on the color shade, a productivity of 45-65 m²/kg is to be expected with press-ready ink and use of a mesh 120.34.

Others

Delivery	1 kg / 5 kg / 25 kg
Certificates / Standards	www.printcolor.ch/certificate
Others	Stir well before use.
	Information on shelf life can be found on the cover label.

Basic Color Systems

HP Basic Color Mixing System with high pigmented basic colors.

Safety Information

Actual Material Safety Data Sheets according to EC-Regulation 1907/2006 are available for all products, mentioned in this data sheet.

Issued on	Revision on	Edited by	Version
31/08/2015	29/06/2016	T12 / T06 / T21	2

Important Information

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor for their suitability for each application. You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilized by you with respect to any and all damages not caused intentionally or by gross negligence.